

# **Wolf Creek Watershed (HUC10 #0307010309) TMDL Implementation Plan**

## **Narrative**

### **Henry County, Georgia**

Total Maximum Daily Load (TMDL) Implementation Plans are platforms for establishing a course of actions to restore the quality of impaired water bodies in a watershed. They are intended as a continuing process that may be revised as new conditions and information warrant. Procedures will be developed to track and evaluate the implementation of the management practices and activities identified in the plans. Once restored, appropriate management practices and activities will be continued to maintain the water bodies.

The Wolf Creek Watershed (HUC10 #0307010309) is located in the upper portion of the Ocmulgee River Basin in the metro Atlanta area. The local governments with interest in the Section 305(b) / Section 303(d) listed stream segment in this HUC10 watershed includes: Henry County and the City Locust Grove. The stream segment identified on Georgia Environmental Protection Division's 303(d) list in the Wolf Creek HUC10 Watershed is Brown Branch (Headwaters to Wolf Creek). The 303 (d) listed stream segment of Wolf Creek is located in Henry County, Georgia.

This stream segment is identified as water quality limited (i.e. 303(d) listed as Biota Impacted) due to sedimentation. As described by US EPA in the Sediment TMDL document dated January 2002 the Biota Impacted designation indicates that studies have shown a modification of the biological community, more specifically, fish. In 1990, 1998, and 1999, the Department of Natural Resources (DNR) Wildlife Resource Division (WRD) conducted studies of fish populations. WRD used the Index of Biotic Integrity (IBI) and modified Index of Well-Being (IWB) to identify affected fish populations. The IBI and IWB values were used to classify the population as Excellent, Good, Fair, Poor, or Very Poor. Stream segments with fish populations rated as Poor or Very Poor were included in the partially supporting list.

For each waterbody on the 303(d) list, the U.S. Clean Water Act requires a TMDL be developed for each pollutant. A TMDL is a calculation of the maximum amount of a pollutant, from both point and non-point sources that a waterbody can receive and still meet water quality standards. The U.S. EPA developed a TMDL for this stream segment in January 2002 that shows a 48.4% reduction in sediment loads is needed.

Henry County Planning & Zoning staff identified the potential sources of pollution in this watershed. The following potential pollution sources were identified for this segment: urban runoff, agriculture, unpaved road surfaces and stream bank erosion. The Georgia Forestry Commission (GFC) has been contracted by GA EPD to monitor active silvicultural operations in the Browns Branch stream segment watershed and the GFC has identified silviculture as a potential pollutant source.

This implementation plan was developed with the help of representatives from Henry County Planning & Zoning, Henry County Water & Sewerage Authority and the City of Locust Grove. The Atlanta Regional Commission coordinated the public meetings and the input received from

local stakeholders and technical advisory staff. Stakeholders were identified in this plan with the input of local governments and by searching the county's tax records to determine large landowners. We also used the U.S. EPA's Enforcement and Compliance History Online (ECHO) website to search for large industries in the watershed. Other stakeholders listed in the plan were included because of their interest in the affected watershed at either the May or June public meeting. This stream segment was discussed at an initial public meeting in May 2003 to educate stakeholders about the TMDL process and to solicit input from local stakeholders. This meeting was followed up with another meeting in June 2003 to discuss the draft implementation plan. Comments and requested revisions to the draft plan have been considered in developing this final draft implementation plan.

The GFC has proposed to conduct monthly aerial reconnaissance of the watershed and monitor all active sites to provide for "reasonable assurance" that BMPs are implemented on these sites. Cases of noncompliance will be turned over to EPD for enforcement.

A portion of Henry County's management measures are based on their NPDES Phase II Municipal Separate Storm Sewer System (MS4) Permit requirements. Other management measures included in the plan are voluntary such as Henry County's drainage ditch maintenance program and their design requirement checklist for erosion and sediment control plans. The Henry County Government has an extensive public education / outreach program planned for educating the public about water quality concerns. These programs include a range of activities such as educational pamphlets and activities for schools age students. Henry County also maintains a stormwater website for educational purposes. Henry County also plans to start an Adopt-A-Stream program and storm drain stenciling program.

The purpose of this implementation plan is to reduce or eliminate the sources of sediment contributing to these stream segments in order to meet the water quality standard. The water quality attainment date will be ten years from the time the implementation plan is approved.

# STATE OF GEORGIA REVISED TMDL IMPLEMENTATION PLAN WATERSHED APPROACH

Local Watershed Governments

ATLANTA REGIONAL COMMISSION  
Henry County      City of Locust Grove

TMDL Implementation Plans are platforms for establishing a course of action to restore the quality of impaired water bodies in a watershed. They are intended as a continuing process that may be revised as new conditions and information warrant. Procedures will be developed to track and evaluate the implementation of the management practices and activities identified in the plans. Once restored, appropriate management practices and activities will be continued to maintain the water bodies. **With input from appropriate stakeholder groups, a TMDL Implementation Plan has been developed for a cluster of impaired waterbodies/streams and the corresponding pollutants.** The impaired waterbodies are located in the same watershed/sub-basin identified by a HUC10 code (Figure 1).

This Implementation Plan addresses an action plan, education/outreach activities, stakeholders, pollutant sources, and potential funding resources affecting the watershed. In addition, the Plan describes (a) regulatory and voluntary practices/control actions (*management measures*) to reduce target pollutants, (b) milestone schedules to show the development of the management measures (*measurable milestones*), (c) a monitoring plan to determine the efficiency of the management measures and measurable milestones, and (d) criteria to determine whether substantial progress is being made towards reducing pollutants in impaired waterbodies. The overall goal of the Plan is to define a set of actions that will help achieve water quality standards in the state of Georgia. Following this section is information regarding individual impaired streams.

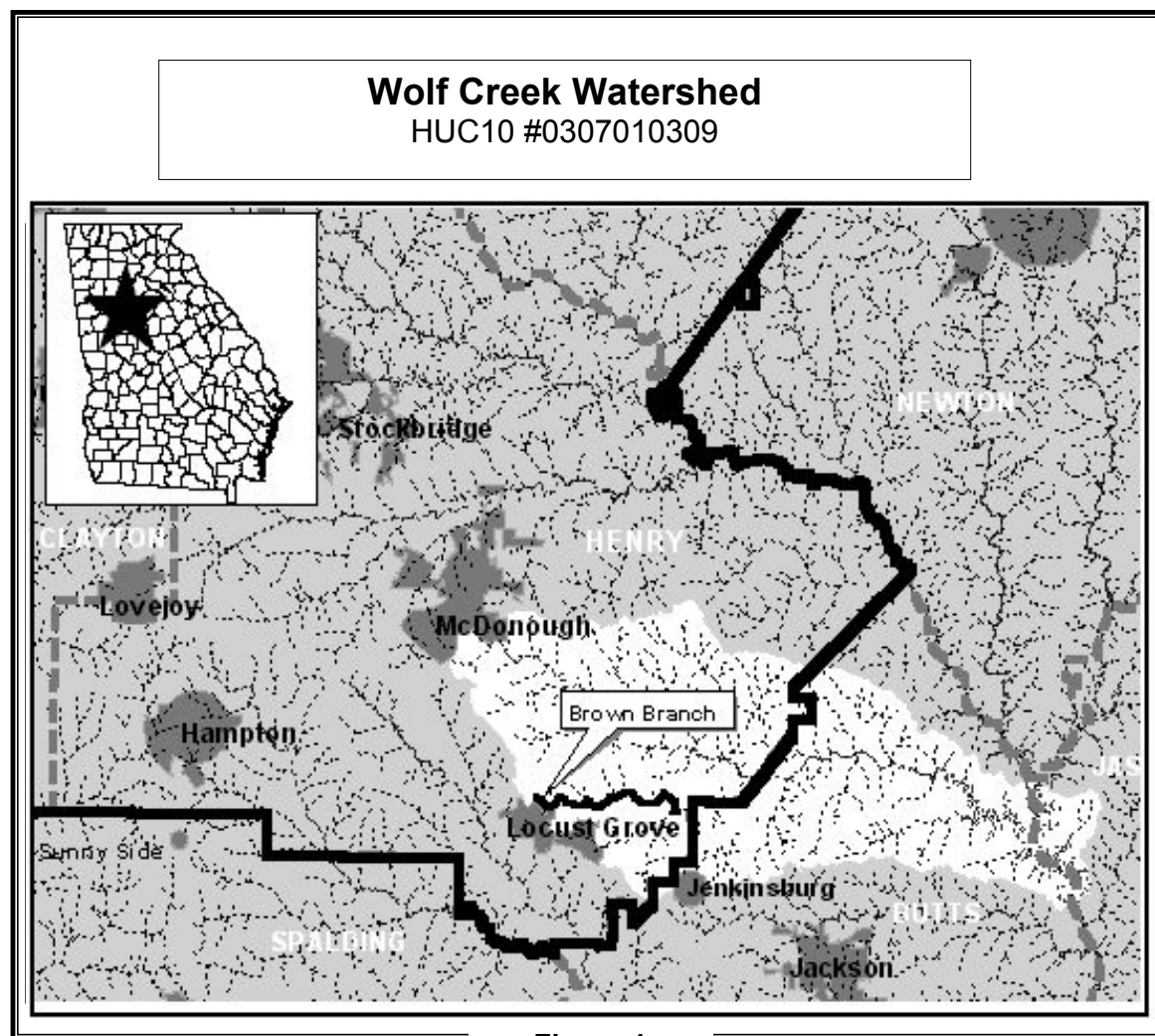


Figure 1

Impaired Waterbody*	Impaired Stream Location	Impairment
1. Brown Branch	Headwaters to Wolf Creek	Biota Impacted/Sediment (Biota)

\*These Waterbody Numbers are referenced throughout the Implementation Plan.

# Action Plan for Wolf Creek Watershed

Watershed: Wolf Creek  
HUC10: #0307010309

POLLUTANT:	SOURCE:	EFFECT:	WHAT CAN I DO?	
			At Home: Community, School	At Work: Business, Government
<input type="checkbox"/> Dissolved Oxygen (DO)	<input type="checkbox"/> Industrial	<input checked="" type="checkbox"/> Habitat	- Report erosion & sediment problems when you find them	- Maintain silt fence and other erosion & sediment control measures on your property when conducting land disturbing activities
<input type="checkbox"/> Fecal Coliform (FC)	<input checked="" type="checkbox"/> Urban	<input type="checkbox"/> Recreation		
<input checked="" type="checkbox"/> Sediment	<input checked="" type="checkbox"/> Agriculture	<input type="checkbox"/> Drinking Water		
<input type="checkbox"/> Metals	<input checked="" type="checkbox"/> Forestry	<input type="checkbox"/> Aesthetics		
<input type="checkbox"/> Fish Consumption Guidelines (FCG)	<input checked="" type="checkbox"/> Residential	<input type="checkbox"/> Other (Please List)		
<input type="checkbox"/> Other (Please List)	<input checked="" type="checkbox"/> Other (Please List) Unpaved Road Surfaces, Stream Bank Erosion			

## INFORMATION/EDUCATION/OUTREACH ACTIVITIES

An education/outreach component will be used to enhance public understanding of and participation in implementing the TMDL Implementation Plan.  
List of all previous and planned information/education/outreach activities.

Responsible Organization Or Entity	Description	Impacted Waterbodies*	Target Audience	Anticipated Dates (MM/YY)
Henry County Government	Develop two educational pamphlets on stormwater issues	1	Homeowners, Developers, Businesses	12/03
Henry County Government	Develop or purchase educational materials for outdoor classroom.	1	Children in 5 <sup>th</sup> grade and their parents	12/03
Henry County Government	Develop quarterly newspaper articles and/or newsletters on the stormwater management program	1	General Public	09/03 – 12/07
Henry County Government	Seek watershed-based solutions to water quality problems through sharing resources, promoting uniformity, and coordinating policies with other governmental jurisdictions within the county and watersheds. This will be accomplished through quarterly meetings beginning in fall 2003.	1	Neighboring Governmental Jurisdiction	09/03 – 12/07
Henry County Government	Henry County Stormwater Website: <a href="http://www.co.henry.ga.us/PlanningZoning/StormWater/StormWater.htm">http://www.co.henry.ga.us/PlanningZoning/StormWater/StormWater.htm</a>	1	General Public	Ongoing
Henry County Government	Adopt-A-Stream	1	General Public	07/06
Henry County Government	Community Stormwater Hotline	1	General Public	12/03
Henry County Government	Awards program for volunteer groups, subdivisions, businesses, builders, and developers for exhibiting exceptional steps toward stormwater/water quality management	1	General Public	10/05
Henry County Government	"Watershed Days" program	1	General Public	11/04
Henry County Government	Storm drain stenciling day in the county - "Adopt-A-Storm Drain" day.	1	General Public	12/04
Henry County Government	Quarterly meetings of the Stormwater Advisory Group	1	Residents, Developers, Environmental Groups, County & City Employees	06/03
Georgia Forestry Commission (GFC)	Conduct forestry Best Management Practices (BMPs) educational training at Master Timber Harvester and continuing logger education programs, civic programs, and landowner meetings.	1	Foresters, timber buyers & loggers, site preparation contractors, landowners	Continuous

## STAKEHOLDERS

EPD encourages public involvement and the active participation of stakeholders in the process of improving water quality. Stakeholders can provide valuable information and data regarding their community and the impaired water bodies and can provide insight and/or implement management measures.

List of local governments, agricultural organizations or significant landholders, commercial forestry organizations, businesses and industries, and local organizations including environmental groups and individuals with a major interest in this watershed.

Name/Organization	Address	City	State	Zip	Phone	E-Mail
GA EPD, Water Protection Branch	4220 International Pkwy, Suite 101	Atlanta	GA	30354	(404) 675-1751	
GA Adopt-A-Stream	4220 International Pkwy, Suite 101	Atlanta	GA	30354	(404) 675-1636	
Georgia Soil and Water Conservation Commission	1500 Klondike Road Suite A109	Conyers	GA	30094	770-761-3020	<a href="mailto:kshahlace@gaswcc.org">kshahlace@gaswcc.org</a>
Henry County Board of Commissioners	140 Henry Parkway	McDonough	GA	30253	770-954-2405	
Henry County Planning & Zoning (Director)	140 Henry Parkway	McDonough	GA	30253	770-954-2979	<a href="mailto:dhall@co.henry.ga.us">dhall@co.henry.ga.us</a>
Henry County Water and Sewerage Authority (Pat Hembree)	1695 Highway 20 West	McDonough	GA	30253		
Henry County Schools (Superintendent)	396 Tomlinson Street	McDonough	GA	30253	770-957-6601	
Henry County Extension Service	86 Work Camp Road	McDonough	GA	30253	770-954-2060	<a href="mailto:showing@uga.edu">showing@uga.edu</a>
NRCS (McDonough, GA Office)	333 Philips Drive	McDonough	GA	30252	770-957-5705	
City of Locust Grove (Mayor)	PO Box 900	Locust Grove	GA	30248	(678) 583-3595	
Georgia Forestry Commission	PO Box 819	Macon	GA	31202	478-751-3485	
Georgia Forestry Association	500 Pinnacle Court, Ste. 505	Norcross	GA	30071	770-416-7621	
Southeastern Wood Producers	PO Box 9	Hilliard	FL	32046	904-845-7133	

## WATER BODIES/STREAMS COVERED IN THIS PLAN

These impaired streams are located in the same sub-basin identified by a HUC10 code. Most of the information contained in this section comes from the 303(d) list and has been completed by employees of the EPD Water Protection Branch. Data that placed the streams on the 303(d) list will be provided upon request.

Waterbody Name #1	Location	Miles/Area Impacted	Use Classification	Partially Supporting/ Not Supporting (PS/NS)
Brown Branch	Headwaters to Wolf Creek	5 miles	Fishing	PS
Primary County	Secondary County	Second RDC		Source (Point/ Nonpoint)
Henry				Nonpoint (NP)
Pollutants	Water Quality Standards	Required Load Reduction	TMDL ID	Date TMDL Established
Biota	All waters shall be free from material related to municipal, industrial or other discharges which produce turbidity, color, odor or other objectionable conditions which interfere with legitimate water uses	48.4%		January 2002

## POLLUTANT SOURCES

It is important to recognize the potential source(s) causing water quality impairment. Each source must be controlled to comply with target TMDL/Load Allocations for each pollutant. Included is a description of how the sources contribute to the impairment and the waterbody that is impaired.

List of major nonpoint source categories and sub-categories or individual sources (Urban Runoff, Agriculture, Forestry, Municipal Sewage Treatment Plant )

Pollutant	Sources of Pollutants	Description of Contribution To Impairment	Impacted Waterbodies*
Sediment	Urban Runoff	Non-point Source	1
Sediment	Agriculture	Non-point Source	1
Sediment	Unpaved Road Surfaces	Non-point Source	1
Sediment	Stream Bank Erosion	Caused by increased flow due to urban runoff	1

Pollutant	Sources of Pollutants	Description of Contribution To Impairment	Impacted Waterbodies*
Sediment	Silviculture	Possible introduction of sediment from normal practices and stream crossings when BMPs are not followed.	1

### MANAGEMENT MEASURES, MEASURABLE MILESTONES AND SCHEDULE (i.e. Local codes and ordinances, Erosion and Sedimentation Control, Storm Water Management, Local water resource monitoring)

The following table lists management measures that have been or will be implemented to achieve water quality standards and the load reductions established in the TMDL. The management measures, including regulatory or voluntary actions or other controls by governments or individuals, specifically apply to the pollutant and the waterbody for which the TMDL was written. A description is provided of how these management measures are/will be accomplished through reliable and effective delivery mechanisms, and how these management measures are/will help achieve the target TMDL. Included is the source of the pollutant, anticipated/past effectiveness of the management measure (very effective, somewhat effective, not effective), the current status (i.e. enforced, in-progress, planning), and measurable milestones and schedule. Milestones are used to measure progress in attaining water quality standards and to determine whether management measures are being implemented.

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/Projected Date	Status	Regulatory/Voluntary
NPDES Phase II MS4 Municipal Stormwater Permit	Henry County Government	Requires jurisdiction to have a comprehensive stormwater program, which includes public education and participation, illicit discharge detection and elimination, construction site runoff control, post construction runoff control, pollution prevention, permitting and reporting, and program implementation plans.	March 2003	Planning	Regulatory

Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness
Sediment	Urban Runoff	1	The goals of this program are designed to improve water quality conditions and/or prevent further degradation of water quality and biotic integrity in the impaired stream corridor.

Measurable Milestones	Schedule		Comments
	Start	End	
Refer to Annual Report for project effectiveness.	2004	Ongoing	Notification of Intent (NOI) is currently under review by GA EPD. Annual reporting will be based on the permit signing date.



Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/Projected Date	Status	Regulatory/Voluntary
Georgia Erosion and Sediment Control Act	GA EPD and Henry County Government	Construction site erosion control standards and 25 foot stream buffer enforcement	1975	Enforced	Regulatory

Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness
Sediment	Urban Runoff	1	The goals of this program are designed to improve water quality conditions and/or prevent further degradation of water quality and biotic integrity in the impaired stream corridor.

Measurable Milestones	Schedule		Comments
	Start	End	
Review and inspect E&S construction site control measures	Ongoing		

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/Projected Date	Status	Regulatory/Voluntary
Drainage Ditch Maintenance	Henry County Department of Transportation	Drainage ditches to be maintained in sections to leave some vegetation on place to trap sediment. Maintenance of these sections will be alternated. Hydroseeding will be used to re-vegetate ditches after maintenance and for the back slopes. Erosion control matting will be used along steep back slopes, as appropriate.	Dec 2004	Planning	Voluntary

Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness
Sediment	Urban Runoff	1	Sediment runoff from unpaved roads is a significant source of sediment within the unincorporated portions of the county.

Measurable Milestones	Schedule		Comments
	Start	End	
Purchase equipment and supplies to begin new maintenance procedures.	Dec 2004	Ongoing	

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/Projected Date	Status	Regulatory/Voluntary
Comprehensive Map/Inventory of Stormwater Management System	Henry County Government	A comprehensive storm sewer mapping/GIS program will be implemented. Items to be mapped and compiled into the GIS program include storm system conveyances, inlets, outfalls, stormwater detention ponds, drainage basin, and receiving waters.	Ongoing	In-progress	Voluntary

Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness
Sediment	Urban Runoff	1	A comprehensive mapping/GIS program allows the county to have extensive knowledge of the locations for all stormwater structures and conveyances.

Measurable Milestones	Schedule		Comments
	Start	End	
Continue mapping/GIS program already in progress. Evaluate funding needed for the next year. Complete 20% of total work.		Dec 2003	
Continue mapping/GIS program already in progress. Evaluate funding needed for the next year. Complete 50% of total work.		Dec 2004	
Continue mapping/GIS program already in progress. Evaluate funding needed for the next year. Complete 75% of total work.		Dec 2005	
Continue mapping/GIS program already in progress. Evaluate funding needed for the next year. Complete 100% of total work.		Dec 2006	

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Land Disturbance Activities Training and Certification Program	Henry County Government	Develop a training and certification program for individuals involved with land disturbance activities. The program should include local engineers, developers, contractors, builders, county personnel, landscape architects, and others who intend to perform similar construction.	2004	Planning	Regulatory

Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness
Sediment	Urban Runoff	1	A certification program for erosion and sediment control and stormwater management ensures everyone involved in land disturbing activities is aware of proper construction, maintenance, and importance of sediment and erosion control measures and stormwater management facilities.

Measurable Milestones	Schedule		Comments
	Start	End	
Evaluate funding and requirements for a certification program		Dec 2004	
Adopt program as part of regulations/requirements		May 2005	
Establish certification dates	2005		Certification Dates: February 2005, August 2005
Implement / require certification	2006		Certification Dates: February 2006, August 2006
Program required	2007		Certification Dates: February 2007, August 2007

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/Projected Date	Status	Regulatory/Voluntary
Ordinance Revisions	Henry County Government	Review the current Erosion & Sediment control ordinance and modify as appropriate. Include requirements for professionals involved in erosion and sediment control design and construction to be certified by Henry County. Include requirements for pollution prevention at the construction site through the preparation of an Erosion, Sedimentation & Pollution Control Plan to address issues such as trash, construction debris, leaking vehicles, storage of chemicals, etc.	2003	In-progress	Regulatory

Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness
Sediment	Urban Runoff	1	There are proposed changes to the state's erosion and sediment control program. Ordinance modifications will probably be required to implement these changes. In addition, channel protection and conservation subdivision ordinances will provide further guidelines for construction activities.

Measurable Milestones	Schedule		Comments
	Start	End	
Continue review of existing ordinances dealing with construction site runoff. Develop / adopt changes.	2003	Dec 2003	
Review regulations and develop / adopt changes.	2007	Dec 2007	

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/Projected Date	Status	Regulatory/Voluntary
Adopt the Georgia Stormwater Management Manual (GSMM)	Henry County Government	Adopt the Georgia Stormwater Management Manual (GSMM) as the county's stormwater design manual. The county and cities may also develop an addendum to the manual that has county specific requirements that are not covered by the Georgia Stormwater Management Manual.	2003	Planning	Voluntary

Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness
Sediment	Urban Runoff	1	The county staff reviewed the manual and believes the design methodologies would benefit the county's water quality.

Measurable Milestones	Schedule		Comments
	Start	End	
Adoption of the Georgia Stormwater Management Manual		Dec 2003	
County specific addendum to Georgia Stormwater Management Manual		Dec 2005	

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/Projected Date	Status	Regulatory/Voluntary
Stormwater Ordinance (Article IV. Stormwater Runoff, Henry County Code Sec. 3-6-61)	Henry County Planning & Zoning	Ordinance to address non-point source pollution.	1994	In-progress	Regulatory

Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness
Sediment	Urban Runoff	1	Gives the inspectors a way to address non-point source pollution that is discharged into the MS4 system.

Measurable Milestones	Schedule		Comments
	Start	End	
Conduct development plan review to ensure compliance with County stormwater runoff regulations	1994	Ongoing	

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/Projected Date	Status	Regulatory/Voluntary
Stormwater Management Audit / Assessment	Henry County Government	Internal assessment of stormwater pollution prevention plan (map of facility and responsibilities for upkeep): municipal operations, automobile maintenance, car washing, illegal dumping control, landscaping and lawn care, parking lot and street cleaning, roadway and bridge maintenance, septic system controls, storm drain system cleaning, stormwater detention basins maintenance, alternative products, hazardous materials storage, road salt application and storage, spill response and prevention, used oil recycling, materials management, leaking fluids from vehicles, and street sweeping.	Dec 2004	Planning	Voluntary

Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness
Sediment	Urban Runoff	1	The county needs to ensure that they are meeting all applicable stormwater requirements.

Measurable Milestones	Schedule		Comments
	Start	End	
Begin assessment of county operations	Dec 2004	Dec 2006	

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Stormwater BMP Guidance Document for Municipal Operations	Henry County Government	Following the audit / assessment, prepare a BMP procedures and guidance manual for Henry County and the cities' departments to minimize impact of municipal operations on stormwater runoff. This document should address all of the activities identified in the audit / assessment and focus on any common problem areas identified.	June 2006	Planning	Voluntary

Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness
Sediment	Urban Runoff	1	A consolidated document that addresses all of the activities that the cities and county performs that have an impact on stormwater would help county and city employees be an example to the community.

Measurable Milestones	Schedule		Comments
	Start	End	
Develop BMP guidance document		June 2006	
Conduct first training session		Dec 2006	Distribute BMP Guidance Document and educate all appropriate Henry County and city staff in the use of the Stormwater BMP guidance document.
Complete BMP Guidance document training for all appropriate county staff		Dec 2007	

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Stormwater Complaint Database	Henry County Government	The master stormwater complaint database will be administered by the stormwater hotline operator but should be accessible by all departments involved in stormwater related activities. The stormwater hotline operator would log all complaints in the database and direct the call to the correct department. The database will include at least the following information: source of the complaint, name of the person or business, address, phone number, description of the complaint, data fields to track the investigation and resolution of the complaint. The master stormwater complaint database can be tied to the county's GIS.	2004	Planning	Voluntary

Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness
Sediment	Urban Runoff	1	This allows personnel responsible for this program to maintain a record of complaints, dumping locations, industrial discharges, and how they were resolved over an extended period of time. As the program progresses the procedures may be revised to better suit the needs of the county and public.

Measurable Milestones	Schedule		Comments
	Start	End	
Develop a master complaint database		Dec 2004	
Record all new complaints and stormwater related information and track until a resolution is reached.	Dec 2004	Ongoing	

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/Projected Date	Status	Regulatory/Voluntary
Design Requirement Checklist For Erosion & Sediment Control Plans	Henry County Government	An extensive checklist available to all individuals involved with land disturbing activities that require extensive use of erosion and sediment control measures and stormwater BMPs during construction will be developed. This should be provided at the pre-design meeting.	2003	Planning	Voluntary

Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness
Sediment	Urban Runoff	1	Letting engineers and developers know specifically what is required in the planning stages leads to more complete and accurate plans being submitted for review.

Measurable Milestones	Schedule		Comments
	Start	End	
Develop comprehensive checklist		Dec 2003	
Implement use of checklist	2004		

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/Projected Date	Status	Regulatory/Voluntary
Training Program For Construction and Maintenance of Soil & Erosion Control Measures	Henry County Government	A training program for erosion and sediment control and stormwater management for county and city personnel ensures everyone who is inspecting these measures is aware of proper construction and maintenance techniques, as well as the importance of each.	2004	Planning	Voluntary

Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness
Sediment	Urban Runoff	1	County and city staff should serve as examples to the development community. How can the county and cities ask developers to comply with erosion and sediment control measures if they don't follow the regulations themselves?

Measurable Milestones	Schedule		Comments
	Start	End	
Evaluate funding needed to establish program		Dec 2004	
Begin developing the program objectives		Dec 2005	
Implement training program & establish annual training day	2006		
Hold annual training day	2007		



Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/Projected Date	Status	Regulatory/Voluntary
Erosion & Sediment Control Enforcement Procedures	Henry County Government	Evaluation of the current erosion & sediment control enforcement procedures in order to improve the program's effectiveness. It is anticipated that additional staff will be required to meet the increasing development within the county.	2003	Planning	Regulatory

Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness
Sediment	Urban Runoff	1	Currently, Development and Building Inspectors perform erosion and sediment control inspections. The county's high growth rate necessitates inspectors dedicated to this area.

Measurable Milestones	Schedule		Comments
	Start	End	
Continue review of existing regulations dealing with prevention and enforcement. Develop / adopt changes		Dec 2003	
Enforce new regulations	2004	Ongoing	
Implement new procedures		June 2004	
Review regulations & develop / adopt changes		Dec 2006	

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/Projected Date	Status	Regulatory/Voluntary
Erosion & Sedimentation Control Inspection Checklist	Henry County Government	Develop a standardized inspection checklist for all county and city personnel involved with inspection of erosion and sediment controls BMPs.	2003	Planning	Voluntary

Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness
Sediment	Urban Runoff	1	A standardized checklist will prevent extensive subjectivity when inspecting construction activities. Although some subjectivity is required, an extensive checklist will allow individuals involved with construction activities to know what is required and what the county personnel will be checking.

Measurable Milestones	Schedule		Comments
	Start	End	
Evaluate current erosion & sediment control inspection procedures. Develop checklist.		Dec 2003	
Implement use of checklist	2004		

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Inventory of Exceptional Erosion & Sediment Control Plans	Henry County Government	Maintain copies of construction drawings showing exceptional construction site stormwater control at the county for public viewing. Plans should consist of one example of a residential, commercial, and industrial development, and should be easily available / accessible to the public.	2003	Planning	Voluntary

Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness
Sediment	Urban Runoff	1	The plans would very helpful to site designers who are not experienced with countywide requirements. This should reduce the number of revisions necessary to complete a set of acceptable site plans and therefore reducing the time required by county and city staff.

Measurable Milestones	Schedule		Comments
	Start	End	
Begin maintaining copies of exceptional plans	Dec 2003	Ongoing	

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Plan Review Checklist For Water Quality Control & Channel Protection Measures	Henry County Government	Develop a checklist for use in plan reviews to ensure compliance with water quality control and channel protection measures per the Georgia Stormwater Management Manual. Site design should be done so that the design and layout of stormwater infrastructure will attain stormwater management goals as required by the Georgia Stormwater Management Manual.	2003	Planning	Voluntary

Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness
Sediment	Urban Runoff	1	A standardized checklist will prevent extensive subjectivity when reviewing stormwater plans. An extensive checklist will allow individual s involved with site design to know what is required and what the county personnel will be checking

Measurable Milestones	Schedule		Comments
	Start	End	
Develop and begin using the checklist		Dec 2003	

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/Projected Date	Status	Regulatory/Voluntary
Stormwater System / BMP Inspection & Maintenance Training Program	Henry County Government	The training program is to be established for county and city personnel and may be done in conjunction with erosion and sediment control training and certification. The program should cover construction methods, alternative site-specific BMPs, and long-term maintenance of post-construction BMPs.	2003	Planning	Voluntary

Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness
Sediment	Urban Runoff	1	This ensures staff knowledge of construction methods, alternative site-specific BMPs, and long-term maintenance of post-construction BMPs.

Measurable Milestones	Schedule		Comments
	Start	End	
Evaluate funding required for the program development and implementation		Dec 2003	
Develop program objectives and criteria		Dec 2004	
Implement program	2005		
Hold annual training session	2005	Ongoing	Currently planned for September each year

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/Projected Date	Status	Regulatory/Voluntary
Plan For Retrofitting Stormwater Management Facilities for Water Quality Control	Henry County Government	Develop a plan to retrofit stormwater management facilities to meet water quality performance targets in the Georgia Stormwater Management Manual. Often, the outlet control structure may be modified to allow for water quality control. The plan should investigate how ponds could most effectively be retrofitted and prioritize the existing ponds.	2005	Planning	Voluntary

Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness
Sediment	Urban Runoff	1	Existing stormwater detention facilities were not designed to treat water quality.

Measurable Milestones	Schedule		Comments
	Start	End	
Develop the management & implementation plan	2005	Dec 2006	The plan could be used for potential Capital Improvement Projects during the second permit period.
Complete the management and implementation plan. Investigate grant opportunities.	2006		Grant opportunities will be investigated and a pilot study conducted if funds are available.

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/Projected Date	Status	Regulatory/Voluntary
Require Preliminary Site Concept Meeting	Henry County Government	Review site plan concept by representatives of relevant departments to encourage and assist developer with the use of better site design practices. Manage stormwater (quantity and quality) close to origin, prevent stormwater impacts rather than mitigating them, utilize simple, nonstructural methods – low cost and low maintenance, create multifunctional landscape, and use hydrology as framework for site design.	2003	Planning	Voluntary

Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness
Sediment	Urban Runoff	1	Encouraging developers and their site designers to use better site design practices in the planning stages will result in more sites being designed with these standards.

Measurable Milestones	Schedule		Comments
	Start	End	
Evaluate requirements for establishing pre-concept meeting	2003	Dec 2003	
Develop site concept meeting criteria		Dec 2004	
Implement / adopt site concept meeting in regulations		Dec 2005	
Site concept meeting required	2006	Ongoing	

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/Projected Date	Status	Regulatory/Voluntary
Incorporate Protection / Enhancement of Riparian Buffers in Henry County's Greenspace Program	Henry County Government	The county is currently developing a greenspace program. The program will be expanded to include the purchase and restoration of riparian areas.	2003	Planning	Voluntary

Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness
Sediment	Stream Bank Erosion	1	Protection and enhancement of riparian buffers could be more easily undertaken as part of an existing program.

Measurable Milestones	Schedule		Comments
	Start	End	
Continue development of a greenway / greenspace program.	2003		
Complete program and update all mapping / databases	2004	Dec 2004	
Maintain mapping / databases	2005	Ongoing	
Revise program objectives	2006	Dec 2006	

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Federal Clean Water Act Section 404	EPA (situations involving forestry are normally referred to the Georgia Forestry Commission to determine compliance with this regulation)	Requires normal ongoing agricultural & silvicultural practices to adhere to BMPs and 15 baseline provisions for road construction and maintenance in and across waters of the US including lakes, rivers, perennial and intermittent streams, wetlands, sloughs, in order to qualify for the exemption from the permitting process.	June 6, 1988	Current	Regulatory

Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness
Sediment from dredge or fill activities	Agriculture & Silviculture	1	EPA identifies Silviculture as the lowest contribution source of nonpoint source pollution

Measurable Milestones	Schedule		Comments
	Start	End	
Georgia Forestry Commission can report status on accomplishments or complaints investigated involving this act to the RDC as needed.	Continuous		

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Memo to the Field: Application of BMPs to mechanical silvicultural site preparation activities for the establishment pine plantations in the Southeast	EPA / US Army Corps of Engineers – (cases normally referred to Georgia Forestry Commission to make initial determination)	Identify certain bottomland hardwood wetlands that should be subject to permitting if converting to pine plantations.	November 1995	Current	Regulatory

Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness
Sediment	Silviculture	1	

Measurable Milestones	Schedule		Comments
	Start	End	
Georgia Forestry Commission can provide status reports as needed	Continuous		

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/Projected Date	Status	Regulatory/Voluntary
Federal Farm Bill (Swampbuster)	US Department of Agriculture Natural Resource Conservation Service (NRCS)	Prohibits landowners participating in federal price support programs from converting forested wetlands to agriculture		Current	Regulatory

Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness
Sediment	Agriculture	1	

Measurable Milestones	Schedule		Comments
	Start	End	
Status reports can be provided as needed	Continuous		

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/Projected Date	Status	Regulatory/Voluntary
Georgia Water Quality Control Act (OCGA 12-5-20)	GA DNR EPD	Makes it unlawful to discharge excessive pollutants (sediments, nutrients, pesticides, animal waste, etc.) into waters of the State in amounts harmful to public health, safety, or welfare, or to animals, birds, or aquatic life or the physical destruction of stream habitats.	1964	Current	Regulatory

Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness
Sediment	Silviculture	1	

Measurable Milestones	Schedule		Comments
	Start	End	
Georgia Forestry Commission investigates and mediates silvicultural complaints on behalf of EPD. Unresolved complaints are turned over to EPD for enforcement. Status reports can be provided to RDC as needed.	Continuous		

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
GA Growth Planning Act (OCGA 12-2-8)	GA DNR, Department of Community Affairs, and local units of government	Authorized GA DNR to develop minimum planning standards and procedures that local jurisdictions could adopt and enforce pertaining to the protection of river corridors, mountaintops, water supply watersheds/reservoirs, groundwater recharge areas, and wetlands. Silvicultural activities may be exempted from permitting requirements provided the activity complies with BMPs.	1991	Local jurisdictions have to adopt ordinances to address these areas	Regulatory

Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness
Sediment	Silviculture	1	

Measurable Milestones	Schedule		Comments
	Start	End	
Georgia Forestry Commission can determine applicability and BMP implementation for local units of government.	Continuous		

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Georgia's Best Management Practices	Georgia Forestry Commission (matters involving enforcement are generally referred to GA EPD)	Inform landowners, foresters, timber buyers, loggers site preparation and reforestation contractors and others involved with silvicultural operations about commonsense, economical effective practices to minimize nonpoint source and thermal pollution.	1989, 1997	Current	Voluntary

Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness
Sediment	Silviculture	1	EPA identifies Silviculture as the lowest contribution source of nonpoint pollution

Measurable Milestones	Schedule		Comments
	Start	End	
	Continuous		

Regulation/Ordinance or Management Measure			Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Georgia Forestry Commission Monthly BMP Assurance Examination			Georgia Forestry Commission (matters involving enforcement are generally referred to GA EPD)	In an effort to document “reasonable assurance” that water quality will be proactively protected during regular ongoing silvicultural operations, the GCF will be identified either through monthly air patrol flights, courthouse records, riding the roads, notification or by landowners. Sites located within watersheds of specific biota (sediment) impaired streams will be given a higher priority to identify and conduct examinations.	1/1/03	Current	Voluntary (violations of the Federal CWA or the Georgia Water Quality Control Act may become a Regulatory issue)
Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness				
Sediment	Silviculture	1	EPA identifies Silviculture as the lowest contribution source of nonpoint pollution				
Measurable Milestones			Schedule		Comments		
			Start	End			
Status reports can be provided as needed			Continuous				

## POTENTIAL FUNDING SOURCES

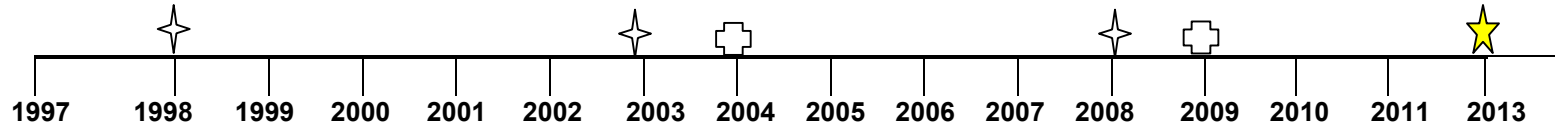
The identification and discussion of dedicated funding is important in determining the economic feasibility of the above-mentioned management measures.

Funding Source	Responsible Authority	Status	Anticipated Funding Amount	Impacted Waterbodies*
General Revenues	Henry County	Ongoing	To Be Determined	1
State and Federal Revenues	Georgia Environmental Protection Division	Ongoing	To Be Determined	1
State and Federal Revenues	Georgia Forestry Commission	Ongoing	To Be Determined	1



## PROJECTED ATTAINMENT DATE

The projected date to attain and maintain water quality standards in this watershed is 10 years from acceptance of the TMDL Implementation Plan by EPD.



EPD Monitoring   
 Evaluate TMDL & Attainment Date   
 Project Attainment 

## MONITORING PLAN

The purpose of this monitoring plan is to determine the effectiveness of the target TMDL and the management measures being implemented to meet water quality standards. List of previous, current or planned/proposed sampling activities or other surveys. Monitoring data that placed stream on 303(d) list will be provided if requested.

Name Of Regulation / Ordinance Or Management Measure	Organization	Impacted Waterbodies*	Pollutants	Purpose/Description	Time Frame		Status (Previous, Current, Proposed)
					Start	End	
Forest Water Quality Program	GFC	1	Sediment	BMP Education			Current
	GFC	1	Sediment	Complaint Investigation			Current
	GFC	1	Sediment	BMP Monitoring monthly Assurance Exams			Proposed
TMDL Monitoring	GA EPD, Wildlife Resources Division	1	Sediment	Index of Biotic Integrity (IBI) & Index of Well-Being (IWB) fish population monitoring that placed the stream on Georgia's 305(b) & 303(d) list.	1999	1999	Previous
Universal Soil Loss Equation (USLE) Modeling	GA EPD	1	Sediment	Modeling done to determine Sediment TMDLs	1999	1999	Previous

## CRITERIA TO DETERMINE WHETHER SUBSTANTIAL PROGRESS IS BEING MADE

The following set of criteria will be used to determine whether any substantial progress is being made towards reducing pollutants in impaired waterbodies and attaining water quality standards. Discussion on each criteria is recorded in the space provided. Additional relevant criteria are presented in comments.

- Percent of concentration or load change (monitoring program) \_\_\_\_\_

\_\_\_\_\_  
*If monitoring results show that it is unlikely that the TMDL will be adequate to meet water quality standards, revision of the TMDL may be necessary.*

- Categorical change in classification of the stream (delisting the stream is the goal) \_\_\_\_\_

\_\_\_\_\_  
- Regulatory controls or activities installed (ordinances, laws) \_\_\_\_\_

\_\_\_\_\_  
- Best management practices installed (agricultural, forestry, urban) \_\_\_\_\_

The GFC has proposed to conduct monthly aerial reconnaissance of the watershed and monitor all active sites to provide for “reasonable assurance” that BMPs are implemented on these sites. Cases of noncompliance will be turned over to EPD for enforcement.

## COMMENTS

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HUC10: #0307010309

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**Environmental Protection Division of the Department of Natural Resources,  
State of Georgia.**

**TOGETHER WE CAN MAKE A DIFFERENCE!**